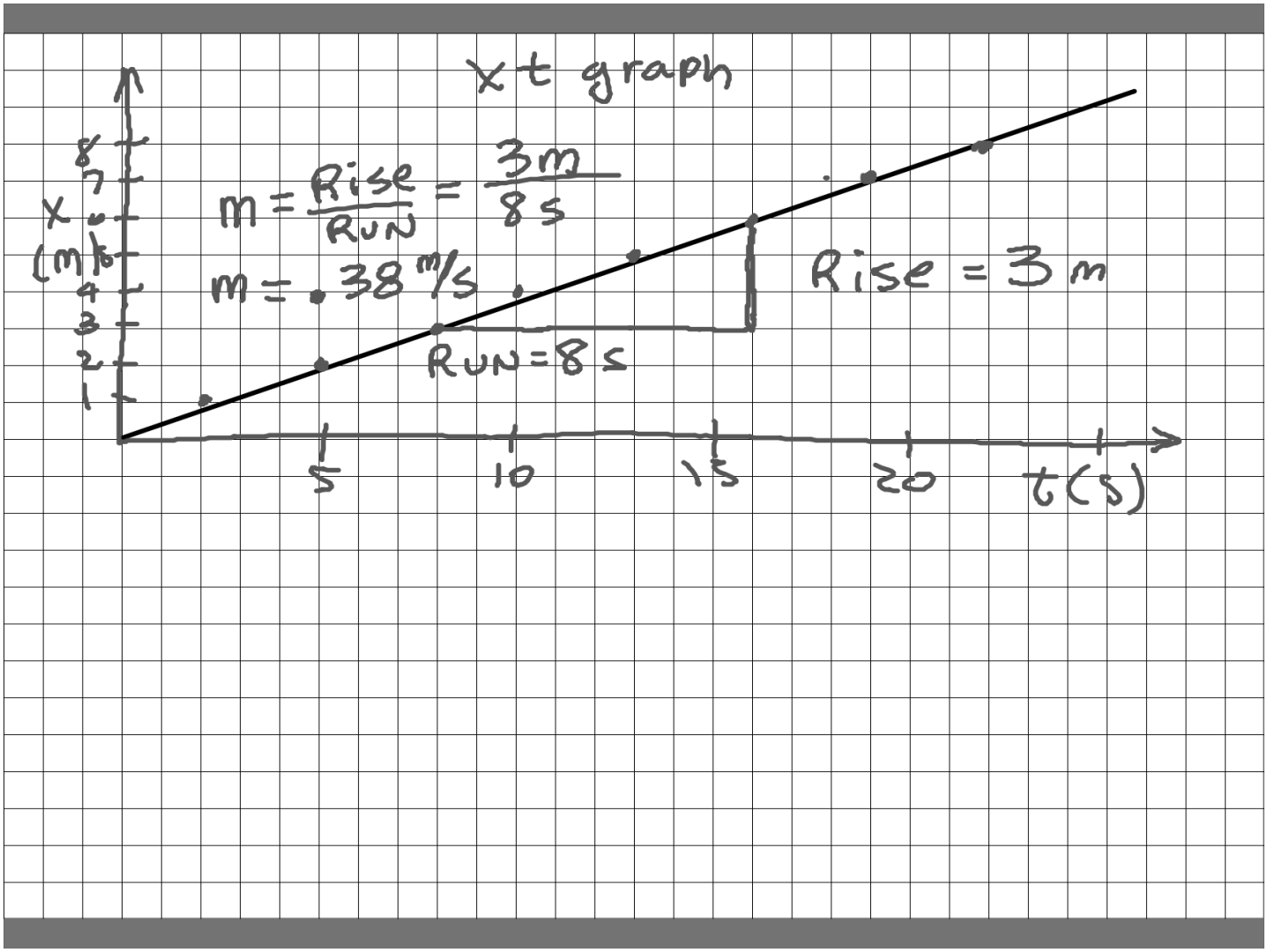
SLOPE

$$y = mx + b$$

↑ SLOPE ↑ y-intercept

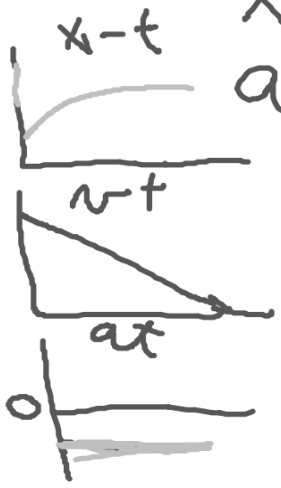
$$m = \frac{\text{change in } y}{\text{change in } x} = \frac{(y_2 - y_1)}{(x_2 - x_1)} = \frac{\text{RISE}}{\text{RUN}}$$

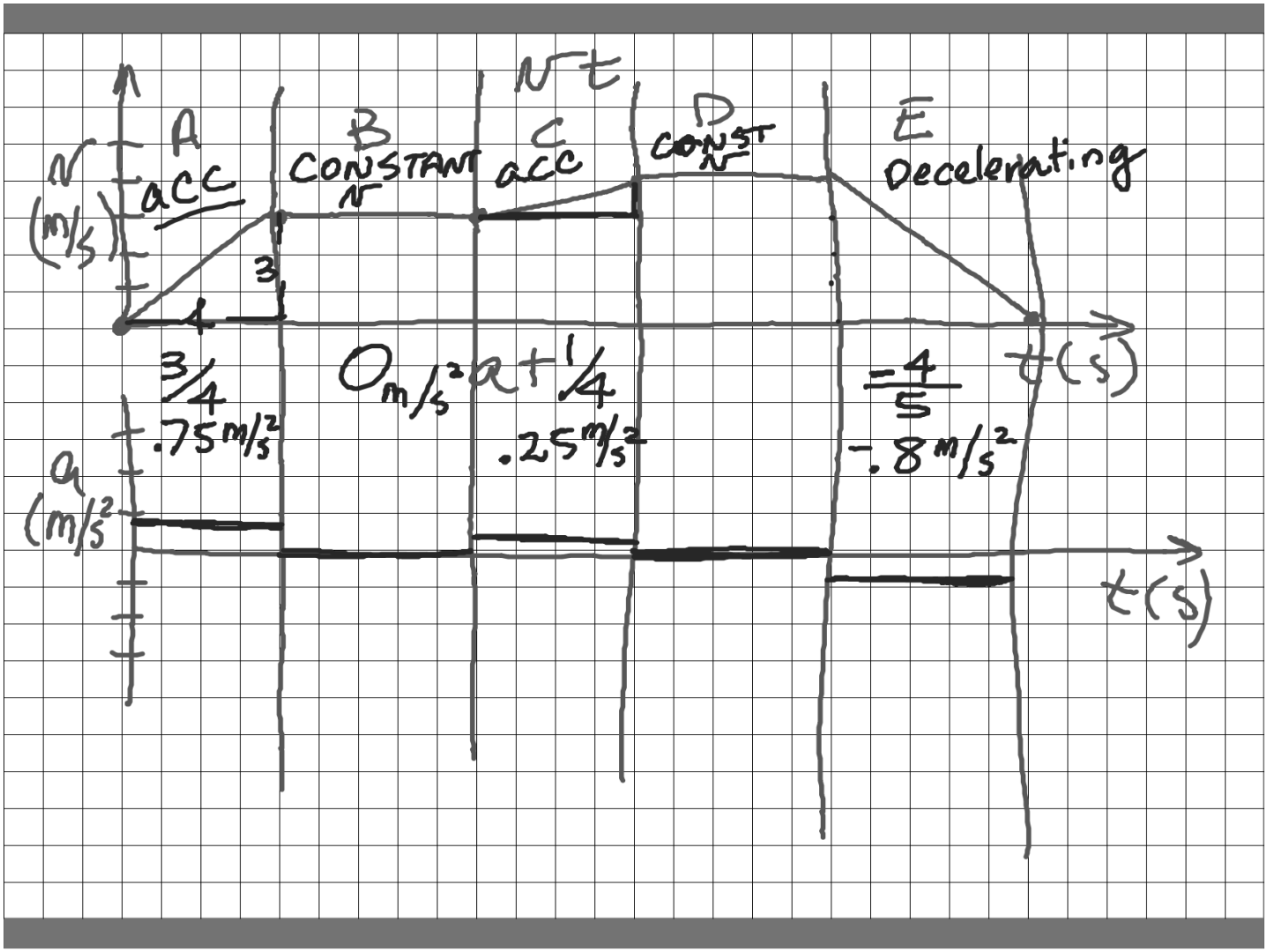

x t graph
x (m)
8
7
6
5
4
3
2
1
5
10
15
20
t (s)
m = Rise / RUN = 3m / 8s
m = .38 m/s
Rise = 3 m
RUN = 8 s

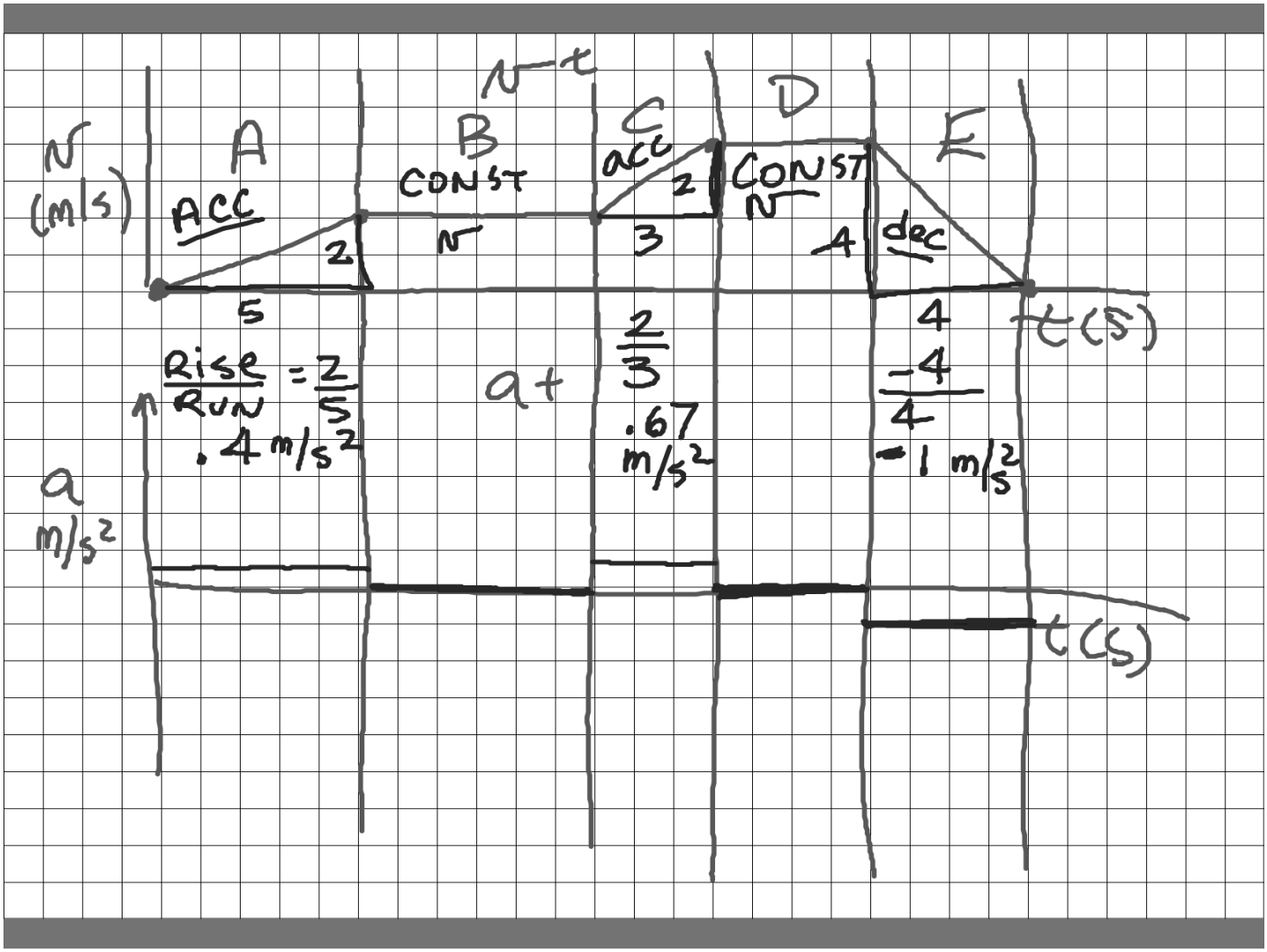
SLOPE of xt line = VALUE of v-t lin
SLOPE of vt line = VALUE of a-t line

(3) when v is decreasing

vt line = (−) SLOPE
Xt Line = CUP down
at Line = HORIZONTAL LINE that is (−)




v-t
A
acc
B
CONSTANT v
C
acc
D
CONST v
E
Decelerating
v (m/s)
3
4
t(s)
3/4
.75 m/s²
0 m/s²
a+1/4
.25 m/s²
-4/5
-.8 m/s²
a (m/s²)
t(s)


v-t
v (m/s)
A
ACC
2
5
B
CONST
v
C
acc
2
3
D
CONST
v
E
4
dec
4
t(s)
Rise/Run = 2/5
.4 m/s²
a+
2/3
.67 m/s²
-4/4
-1 m/s²
a m/s²
t(s)